

ABSTRACT OF THE DISCLOSURE

An object of the present invention is to provide a plasma processing system and a plasma processing method which use inductive coupled plasmas but do not cause disadvantages due to slant electric fields immediately after plasmas have been ignited. Another object of the present invention is to provide a plasma processing system and a plasma processing method which use inductive coupled plasmas and include a Faraday shield to thereby remove slant magnetic fields so as to ensure the ignition of plasmas.

The plasma processing system comprises a chamber 31, a bell jar 32, a coil 42 disposed on the outside of the bell jar 32, a Faraday shield 44 disposed between the bell jar 32 and the coil 42, a susceptor 33, a conducting member 49 disposed upper of the bell jar 32, a first high-frequency electric power source for the coil 42 to generate induced electromagnetic fields, and a second high-frequency electric power source 34 for generating electric fields between the susceptor 33 and the conducting member 49.